



# **NASA Workshop on SnowEx Results & Campaign Planning**

**17 – 18 September 2019**

## **Agenda**

Sheraton Baltimore-Washington International Airport Hotel  
1100 Old Elkridge Landing Rd., Linthicum Heights, MD 21090  
Phone: 443-577-2119

**Tuesday, September 17, 2019**

<b>Time</b>	<b>Topic</b>	<b>Speaker(s)</b>
7:30am	Registration, Breakfast and Poster setup	
9:00	Welcome / Introduction	Jerry Newlin and Joann Collins
9:00	Opening Presentations	Chair, Dorothy Hall; Rapporteur, DK Kang
9:05 – 9:30	NASA, THP and snow	Jared Entin
9:30 – 9:50	SnowEx'20 overview, including SnowEx'20 - UAVSAR time series campaign and SnowEx'20 IOP Grand Mesa	HP Marshall and Carrie Vuyovich
9:50 – 10:10	Overview: results from SnowEx'17 and NASA mission proposals	Ed Kim
10:10 – 10:20	Brief Updates on SnowEx'17 Data available from SnowEx'17 & Special Issue of WRR	Charles Gatebe Jessica Lundquist
10:20 – 10:45	Break	
10:45	Missions, Mission Planning and Lessons Learned	Chair, Ed Kim; Rapporteur, Madhi Navari
10:45	Summary of the Decadal Survey	Ana Barros
11:05 – 11:20	ICESat-2 measurement and coverage in the mid-latitudes, & some lessons learned	Tom Neumann

**Tuesday, September 17, 2019**

<b>Time</b>	<b>Topic</b>	<b>Speaker(s)</b>
11:20 – 11:35	GEDI, LVIS, LiDAR drone	Bryan Blair
11:35 – 11:55	Trade-offs during the mission planning of SWOT	Mike Durand
11:55 – 12:10	Discussion	
12:10 – 1:30	Lunch / Poster Session	
1:30	Snow Remote Sensing Campaigns and Path to a Satellite Mission	Chair, Ana Barros; Rapporteur, Mike Durand
1:30 – 1:50	Results from Trail Valley Creek radar experiments and the Canadian Phase 0 proposal	Josh King
1:50 – 2:10	Considering Alaska Landscapes; science questions, places, and people	Chris Hiemstra
2:10	SnowEx Science Plan, followed by student presentations	Chairs, Ann Nolin & Kelly Gleason; Rapporteur, Nancy Glenn
2:10 – 2:30	SnowEx Science Plan	Mark Raleigh & Mike Durand
2:30 – 3:00	Graduate student blizzard presentations	John Hammond
3:00 – 3:30	Break	

**Tuesday, September 17, 2019**

<b>Time</b>	<b>Topic</b>	<b>Speaker(s)</b>
3:30	Leveraging existing partnerships/networks	Chairs, McKenzie Skiles & Dan McGrath; Rapporteur, Charles Gatebe
3:30 – 3:45	ASO Update	Tom Painter
3:45 – 4:00	CRREL snow remote sensing campaigns and collaboration possibilities	Eli Deeb
4:00 – 4:15	NOHRSC Activity	Carrie Olheiser
4:15 – 4:30	Airborne FMCW Radar	Drew Taylor
4:30 – 4:45	Leveraging Cubesat SoOp observations for SnowEx	Rajat Bindlish
4:45 – 4:50	Commercial satellite stereo DEM observations for snow depth	David Shean
4:50 – 5:05	Comments on SnowEx partnerships	Jared Entin
5:05 – 5:15	Discussion	Chair, David Shean; Rapporteurs, Ana Barros & Ann Nolin
5:15	Adjourn	
5:15 6:30	Happy Hour (CASH BAR) Dinner buffet at the hotel	

**Wednesday, September 18, 2019**

<b>Time</b>	<b>Topic</b>	<b>Speaker(s)</b>
7:30am	Breakfast	
8:30	Snow Modeling Applications and Needs	Chairs, Carrie Vuyovich & Leung Tsang; Rapporteur, Joel Johnson
8:30 – 8:45	Global scale intercomparisons of SCF and SWE products	Lawrence Mudryk
8:45 – 9:00	Fine scale physical modeling; gaps and downscaling	Jessica Lundquist
9:00 – 9:15	Targeting snow model uncertainty with field data and remote sensing	Mark Raleigh
9:15 – 9:30	Data assimilation, machine learning and a Snow OSSE	Sujay Kumar
9:30 – 10:00	Discussion - How can models inform campaign planning? What model needs should we consider when designing campaigns?	
10:00 – 10:30	Break	
10:30 – 10:45	Overview of “1-page” proposals and notional campaigns and charge to breakout	Chair, Jessica Lundquist; Rapporteur, Jeff Deems

**Wednesday, September 18, 2019**

<b>Time</b>	<b>Topic</b>	<b>Speaker(s)</b>
10:45 – 12:15	<p>Break into groups with an objective to prioritize aspects of future SnowEx campaigns and to identify gaps in the proposed campaigns. Charge to the breakout groups: develop a strawman campaign proposal for each group activity.</p> <p>Each working group should develop a notional campaign or campaigns to address the questions formulated at the Tuesday group breakout sessions.</p> <ul style="list-style-type: none"><li>• Group 1. Chair, Chris Hiemstra; Rapporteurs, Josh King &amp; Lawrence Mudryk - Tundra/taiga/boreal forest snow</li><li>• Group 2. Chairs, Jennifer Jacobs; Rapporteurs, DK Kang &amp; Sam Tuttle - Prairie snow</li><li>• Group 3. Chair: Jessica Lundquist; Rapporteurs, HP Marshall &amp; Mark Raleigh - Maritime snow</li></ul>	
12:15 – 1:15	Lunch / Poster session	
1:15 – 2:15	Presentations of notional campaigns by rapporteurs	Chair, Nancy Glenn; Rapporteur, Paul Houser
2:15 – 2:30	Break	
2:30 – 2:35	Charge to next breakout	Jared Entin

**Wednesday, September 18, 2019**

<b>Time</b>	<b>Topic</b>	<b>Speaker(s)</b>
2:35 – 4:00	Break into groups with an objective to assess the outstanding questions for future campaigns <ul style="list-style-type: none"><li>• Sensors – Chair, Jeff Deems; Rapporteur, Eli Deeb</li><li>• Ground Activities – Chair, Chris Hiemstra; Rapporteur Josh King</li><li>• Modeling – Chair, Paul Houser; Rapporteur, Sujay Kumar</li></ul>	
4:00 – 4:30	Breakout reports from rapporteurs	
4:30 – 5:00	Discussion and Wrap-up	Led by: Jared Entin, Carrie Vuyovich, HP Marshall & Ed Kim; Rapporteurs: Mike Durand and Eli Deeb
5:00	Adjourn	
5:15 – 6:00pm	Splinter Mtg Time Series Activities	Jerry Newlin Time Series Leads